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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,255	12/12/2005	Takashi Hiramatsu	M1071.1950	4999

32172 7590 11/16/2006

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EXAMINER

THOMAS, ERIC W

ART UNIT	PAPER NUMBER
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2831

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/560,255

Applicant(s)

HIRAMATSU ET AL.

Examiner

Eric Thomas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) •
Paper No(s)/Mail Date <u>12/05, 7/06</u> | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims ~~1-15~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over Hori et al. (US 6,310,761) in view of JP 2000-058378('378). cr. uha

Hori et al. disclose a dielectric ceramic composition represented by $100(\text{Ba})_m\text{TiO}_3 + a\text{MnO} + b\text{CuO} + c\text{SiO}_2 + d\text{Re}_2\text{O}_3$ wherein coefficients 100, m, a, b, c, d each represent molar amount; Re represents at least one element Y, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, and Yb and wherein $0.990 \leq m \leq 1.030$ $a = 1.0$, $b = 2.0$, $c = 5.0$, $d = 3.0$ (see abstract and Table 5).

Hori et al. disclose the claimed invention except for the main component comprises $(\text{Ba}_{1-x}\text{Ca}_x)_m\text{TiO}_3$ wherein $0.04 \leq x \leq 0.20$.

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'378 teaches the use of a ceramic main component comprising $(\text{Ba}_{1-x}\text{Ca}_x)_m\text{TiO}_3$ wherein $0.04 \leq x \leq 0.20$.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a main component of $(\text{Ba}_{1-x}\text{Ca}_x)_m\text{TiO}_3$ in the ceramic material of Hori et al., since such a modification would form a ceramic composition having high insulating resistance, and anti reduction property.

Regarding claim 2, the modified Hori et al. disclose in fig. 1, a laminated ceramic capacitor comprising a plurality of laminated dielectric ceramic layers (2a-2b); at least two internal electrodes, each being disposed between a different pair of adjacent dielectric ceramic layers; and at least two external electrodes (5-7) each of which is electrically connected to a different internal electrode, wherein the dielectric ceramic layers comprise the dielectric of claim 1.

Regarding claim 3, the modified Hori et al. disclose each of the internal electrodes comprises nickel.

Regarding claim 4, the modified Hori et al. disclose $0.992 \leq m \leq 1.027$, $0.042 \leq a \leq 4.8$, $0.055 \leq b \leq 4.7$, $0.25 \leq c \leq 7.8$, and $0.055 \leq d \leq 2.45$, and ('378) $0.042 \leq x \leq 0.19$.

Regarding claim 5, the modified Hori et al. disclose $1.001 \leq m \leq 1.011$, $0.2 \leq a \leq 3.5$, $0.1 \leq b \leq 2.5$, $0.5 \leq c \leq 6$, and $.2 \leq d \leq 1.5$, and ('378) $0.08 \leq x \leq 0.17$.

Regarding claim 6, the modified Hori et al. disclose $m = 1.001$, $a = 0.2$, $b = 0.4$, $c = 2$, and ('378) $x = 0.08$.

Regarding claim 7, the modified Hori et al. disclose in fig. 1, a laminated ceramic capacitor comprising a plurality of laminated dielectric ceramic layers (2a-2b); at least

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two internal electrodes, each being disposed between a different pair of adjacent dielectric ceramic layers; and at least two external electrodes (5-7) each of which is electrically connected to a different internal electrode, wherein the dielectric ceramic layers comprise the dielectric of claim 6.

Regarding claim 8, the modified Hori et al. disclose each of the internal electrodes comprises nickel.

Regarding claim 9, the modified Hori et al. disclose in fig. 1, a laminated ceramic capacitor comprising a plurality of laminated dielectric ceramic layers (2a-2b); at least two internal electrodes, each being disposed between a different pair of adjacent dielectric ceramic layers; and at least two external electrodes (5-7) each of which is electrically connected to a different internal electrode, wherein the dielectric ceramic layers comprise the dielectric of claim 5.

Regarding claim 10, the modified Hori et al. disclose each of the internal electrodes comprises nickel.

Regarding claim 11, the modified Hori et al. disclose in fig. 1, a laminated ceramic capacitor comprising a plurality of laminated dielectric ceramic layers (2a-2b); at least two internal electrodes, each being disposed between a different pair of adjacent dielectric ceramic layers; and at least two external electrodes (5-7) each of which is electrically connected to a different internal electrode, wherein the dielectric ceramic layers comprise the dielectric of claim 4.

Regarding claim 12, the modified Hori et al. disclose each of the internal electrodes comprises nickel.

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Regarding claim 13, the modified Hori et al. disclose Re is at least 2 of said elements.

Regarding claim 14, the modified Hori et al. disclose in fig. 1, a laminated ceramic capacitor comprising a plurality of laminated dielectric ceramic layers (2a-2b); at least two internal electrodes, each being disposed between a different pair of adjacent dielectric ceramic layers; and at least two external electrodes (5-7) each of which is electrically connected to a different internal electrode, wherein the dielectric ceramic layers comprise the dielectric of claim 13.

Regarding claim ¹⁵14, the modified Hori et al. disclose each of the internal electrodes comprises nickel.

Conclusion

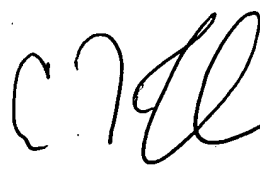
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Thomas whose telephone number is 571-272-1985. The examiner can normally be reached on Monday - Friday 6:30 AM - 3:45 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-1984. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ewt


ERIC W. THOMAS
PRIMARY EXAMINER

11-9-06